

APPENDIX A**WASTE MANAGEMENT FACILITIES
TECHNICAL SAFETY REQUIREMENTS (TSRs)****EXAMPLE****Note:**

The Waste Management Facilities TSRs are presented as an **EXAMPLE**. They demonstrate how derived controls from the safety analysis of NSTR-006-99 will be carried forward into the TSRs. The content of the TSRs will be reviewed and approved at a later date.

**ADMIN. RECEIVED**
IA-1A-A-00243

APPENDIX A WASTE MANAGEMENT FACILITIES TECHNICAL SAFETY REQUIREMENTS (TSRs)

TABLE OF CONTENTS

1	USE AND APPLICATION	
1 1	DEFINITIONS	A-4
1 2	ACRONYMS	A-9
1 3	SAFETY LIMITS/LIMITING CONTROL SETTINGS	A-10
1 4	LIMITING CONDITIONS FOR OPERATIONS/SURVEILLANCE REQUIREMENTS	A-10
1 5	ADMINISTRATIVE CONTROLS	A-10
1 6	DESIGN FEATURES	A-11
1 7	FREQUENCY NOTATION	A-11
1 8	TECHNICAL SAFETY REQUIREMENTS BASES CONTROL	A-11
1 9	LOGICAL CONNECTORS	A-12
2	SAFETY LIMITS AND LIMITING CONTROL SETTINGS	
3/4	LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS	
3 0/4 0	USE AND APPLICATION	A-16
3 1	Fire Suppression and Alarm Transmittal System LCO	A-23
4 1	Fire Suppression and Alarm Transmittal System SRs	A-24
3 2	Criticality Alarm System LCO	A-29
4 2	Criticality Alarm System SRs	A-30
5	ADMINISTRATIVE CONTROLS	A-36
5 0	GENERAL APPLICATION	A-36
5 1	ORGANIZATION AND MANAGEMENT	A-38
5 1 1	Requirements for Organization and Management	A-38
5 1 2	CREDITED PROGRAMMATIC ELEMENTS	A-38
5 1 3	Specific Controls or Restrictions	A-38
5 2	INVENTORY CONTROL AND MATERIAL MANAGEMENT	A-40
5 2 1	Requirements for Inventory Control and Material Management	A-40
5 2 2	CREDITED PROGRAMMATIC ELEMENTS	A-40
5 2 3	Specific Controls or Restrictions	A-40
5 3	CONTROL OF COMBUSTIBLE MATERIALS AND IGNITION SOURCES	A-46
5 3 1	Requirements for Control of Combustible Materials and Ignition Sources	A-46
5 3 2	CREDITED PROGRAMMATIC ELEMENTS	A-46
5 3 3	Specific Controls or Restrictions	A-46
5 4	MAINTENANCE AND SURVEILLANCE OF SC-3 SSCS	A-48
5 4 1	Requirements for Maintenance and Surveillance of SC-3 SSCs	A-48
5 4 2	CREDITED PROGRAMMATIC ELEMENTS	A-48
5 4 3	Specific Controls or Restrictions	A-48
5 5	EMERGENCY RESPONSE	A-50
5 5 1	Requirements for Emergency Response	A-50
5 5 2	CREDITED PROGRAMMATIC ELEMENT	A-50

5 6	SAFETY MANAGEMENT PROGRAMS	A-51
5 6 1	Requirements for Safety Management Programs.	A-51
5B 0	GENERAL APPLICATION BASES	A-52
5B 1	ORGANIZATION AND MANAGEMENT BASES	A-54
5B 1 1	Requirements for Organization and Management BASES	A-54
5B 1 2	CREDITED PROGRAMMATIC ELEMENTS BASES	A-54
5B 1 3	Specific Controls or Restrictions	A-54
5B 2	INVENTORY CONTROL AND MATERIAL MANAGEMENT BASES	A-55
5B 2 1	Requirement for Inventory Control and Material Management BASES	A-55
5B 2 2	CREDITED PROGRAMMATIC ELEMENTS BASES	A-55
5B 2 3	Specific Controls or Restrictions	A-55
5B 3	CONTROL OF COMBUSTIBLE MATERIALS AND IGNITION SOURCES BASES	A-62
5B.3.1	Requirement for Control of Combustible Materials and Ignition Sources BASES	A-62
5B 3 2	CREDITED PROGRAMMATIC ELEMENTS BASES	A-62
5B 3 3	Specific Controls or Restrictions.	A-63
5B 4	MAINTENANCE AND SURVEILLANCE OF SC-3 SSCS BASES	A-64
5B 4 1	Requirement for Maintenance and Surveillance of SC-3 SSCs BASES	A-64
5B 4.2	CREDITED PROGRAMMATIC ELEMENTS BASES	A-64
5B 4.3	Specific Controls or Restrictions...	A-64
5B 5	EMERGENCY RESPONSE BASES...	A-65
5B 5.1	Requirement for Emergency Response BASES.....	A-65
5B.5.2	CREDITED PROGRAMMATIC ELEMENTS BASES.....	A-65
6.	DESIGN FEATURES	A-66
7	REFERENCES..	A-67

LIST OF TABLES

Table 1	Summary of LCO/SR General Requirements	A-16
Table 2	Maintenance of SC-3 SSCs Credited in BIO Safety Analysis	A-49
Table 3	Building 569 Design Features	A-66

1. USE AND APPLICATION

The TECHNICAL SAFETY REQUIREMENTS (TSRs) for WASTE MANAGEMENT FACILITIES establish those requirements that define the conditions, safe boundaries, and ADMINISTRATIVE CONTROLS necessary to ensure safe operation of the RFETS WASTE MANAGEMENT FACILITIES and reduce the risk to immediate workers, collocated workers, the public, and the environment from uncontrolled releases of hazardous materials. There are four types of controls used to provide this assurance: LIMITING CONDITIONS FOR OPERATION (LCOs), SURVEILLANCE REQUIREMENTS (SRs), ADMINISTRATIVE CONTROLS (ACs), and DESIGN FEATURES. A separate "Use and Application" section proceeds each of the LCO and AC sections providing information and instructions for using and applying each type of control. Compliance with all TSRs as written is mandatory as defined in the Applicability Statements of the LCOs and the ACs.

BASES for each of the TSR controls immediately follow the stated controls rather than being included as an annex to the TSRs. This facilitates a better understanding of the need for the control and avoids forcing the reader to search the document for such information.

1.1 DEFINITIONS

NOTE

The defined terms of this section appear in capitalized type throughout the TSRs.

TERM

DEFINITION

ADMINISTRATIVE
CONTROLS (ACs)

Provisions relating to organization and management, inventory control and material management, maintenance and surveillance of System Category 3 (SC-3) Systems, Structures, and Components (SSCs), emergency response, and safety management programs necessary to ensure the safe operations of RFETS WASTE MANAGEMENT FACILITIES.

ADMINISTRATIVE
OPERATING LIMITS
(AOLs)

Specific administrative controls/limits that have been credited in the Waste Management Facility Safety Analysis Report (WMF SAR) Safety Analysis. AOLs are credited as providing a reduction in postulated accident scenario initiation frequency and/or a reduction in postulated accident scenario consequences. Such controls are more precise and discrete than those defined by a safety management program (SMP) or the program elements of a SMP. The AOLs are an administrative equivalent to hardware requirements specified in LCOs and, as such, have requirements for verification of the AOL and requirements for actions following DISCOVERY of a noncompliance with the AOL.

1. USE AND APPLICATION

<u>TERM</u>	<u>DEFINITION</u>
AFFECTED AREA	That portion of a WASTE MANAGEMENT FACILITY in which the credited safety function provided by a single system, subsystem, train, component or device is compromised by an OUT-OF-TOLERANCE or other CONDITION for which REQUIRED ACTIONS are specified
BASIS/BASES	Summary statement(s) of the rationale for the LCOs and associated SRs and ACs. The BASES explain how the numeric value, the specified function, or the surveillance fulfills the credited safety function assumed in the WMF SAR Safety Analysis.
BUILDING 440	
BUILDING 569	Building 569 supporting the waste management mission of non-destructive assay, radiography, and storage of containers of waste including filled wooden waste crates and transuranic (TRU), transuranic-mixed (TRM), low level waste (LLW), LLW-mixed, residue, and residue-mixed waste drums.
BUILDING 664 COMPLEX	
BUILDING 666 TSCA UNIT	
BUILDING 906	
BUILDING 991 COMPLEX	The set of facilities supporting the mission of Building 991 to store transuranic (TRU) waste containers and to stage Special Nuclear Material (SNM) in preparation for off-site shipment. This includes Building 991, Building 996, Building 997, Building 998, Building 999, Building 984, Building 985, Building 989, and Building 992.
COMPLETION TIME	The amount of time allowed to complete a REQUIRED ACTION. The COMPLETION TIME starts whenever a situation (e.g., not OPERABLE equipment or variable not within limits) is DISCOVERED that requires entering the REQUIRED ACTION for a given CONDITION. REQUIRED ACTIONS shall be performed before the specified COMPLETION TIME expires, except as specified under SUSPEND OPERATIONS.
CONDITION	Configuration and status of the facility related to compliance with the TSRs for which REQUIRED ACTIONS are performed within specified COMPLETION TIMES, including, <ol style="list-style-type: none">1 Discrete degradations of LCO-related SAFETY SSCs, and2 Noncompliance with ACs

1. USE AND APPLICATION

<u>TERM</u>	<u>DEFINITION</u>
CREDITED PROGRAMMATIC ELEMENT	A functional (performance language) statement depicting analytical assumptions embodied in safety analysis specific to a given program. These functional statements relate to assumptions that determine the progression of accident scenarios.
DEFENSE-IN-DEPTH	Engineered features and/or administrative programs or program elements which are not used in analysis to reduce frequency or consequences but add additional levels of safe operations. Margin of safety is established by the bounds of the analysis and is not impacted by the loss of, or deficiencies in, defense-in-depth items.
DESIGN FEATURES	Those passive features which, if altered or modified, could have a significant effect on safety.
DISCOVERY/ DISCOVERED	The point in time when it is realized that a CONDITION has been entered.
EMERGENCY EVACUATION	Any evacuation as a result of a significant deviation from planned or expected behavior or course of events that could result in significant consequences to people, property, the environment, or security. It includes unusual events, alerts, Site Emergencies, and general emergencies.
LIMITING CONDITION FOR OPERATION (LCO)	The lowest functional capability or performance level of SAFETY SSCs and their support systems required for safe operations of the facility.
NUCLEAR MATERIAL	Includes Special Nuclear Material (enriched uranium, uranium-233, uranium-235, or plutonium), americium, or neptunium in quantities of one gram or more. It does not include natural uranium, depleted uranium, contamination, or sealed sources.
OPERABLE/ OPERABILITY	A SAFETY SSC shall be OPERABLE when it is capable of performing its safety function(s) as specified in Chapter 5 of the WMF SAR for compliance with the TSRs.
OUT OF COMMISSION	Identifies equipment that has been rendered not available or credited for operation. OUT OF COMMISSION equipment is considered to be administratively removed from the facility and no longer subject to the requirements specified in the TSRs. OUT OF COMMISSION implies that actual physical modification, isolation, or removal can be performed without affecting the overall safety of the facility. For the purpose of the TSRs, equipment, systems, and/or areas are OUT OF COMMISSION when all of the following conditions have been satisfied: <ul style="list-style-type: none">a. The isolation boundary and the affected equipment is properly tagged or labeled and controlled in a manner that will prevent use.

1. USE AND APPLICATION

<u>TERM</u>	<u>DEFINITION</u>
OUT OF COMMISSION continued	<p>b An evaluation of the administrative removal of the affected equipment from service on facility safety has been performed</p> <p>c Analysis shows that any radioactive or other hazardous material remaining in the OUT OF COMMISSION equipment is safely contained</p>
OUT-OF-SERVICE	Equipment formally designated as not available to perform its intended safety function.
OUT-OF-TOLERANCE	A CONDITION that exists upon failure to meet LCOs or SRs when the REQUIRED ACTIONS have been completed within the specified COMPLETION TIMES
750/904 PADS	
RCRA STORAGE UNITS	
REQUIRED ACTIONS	The mandatory response when an LCO or AC cannot be met. REQUIRED ACTIONS include the COMPLETION TIMES for facility operation in an OUT-OF-TOLERANCE or an AC noncompliance before it is required to change operating configuration, except as specified under SUSPEND OPERATIONS.
SAFETY-CLASS STRUCTURES, SYSTEMS, AND COMPONENTS (SAFETY-CLASS SSCs)	Those SAFETY SSCs that have been credited in the WMF SAR Safety Analysis to provide protection of the environment or provide protection for the health and safety of the public (as defined by the maximum exposed off-site individual).
SAFETY-SIGNIFICANT STRUCTURES, SYSTEMS, AND COMPONENTS (SAFETY-SIGNIFICANT SSCs)	Those SAFETY SSCs that have been credited in the WMF SAR Safety Analysis to provide protection for the health and safety of the immediate worker or to provide defense-in-depth protection for the health and safety of the immediate worker, the collocated worker (as defined by a 100 meter distant receptor), or the public (as defined by the maximum exposed off-site individual)
SAFETY STRUCTURES, SYSTEMS, AND COMPONENTS (SAFETY SSCs)	Those structures, systems, and components (SSCs) that are important to safety (i.e., those SSCs that have been credited in the WMF SAR Safety Analysis) SAFETY SSCs consist of SAFETY-CLASS and SAFETY-SIGNIFICANT SSCs
SURVEILLANCE REQUIREMENTS (SRs)	Requirements relating to testing, calibration, or inspection of SAFETY SSCs to ensure that the OPERABILITY of the LCO-related SAFETY SSC is maintained and/or that operations are within the specified parameters of the LCO

1. USE AND APPLICATION

<u>TERM</u>	<u>DEFINITION</u>
SUSPEND OPERATIONS	<p>A formal termination of all activities except for those directly involved in</p> <ol style="list-style-type: none">1 Placing and maintaining the WASTE MANAGEMENT FACILITY in a safe configuration,2 Restoring the safety function associated with the suspension,3 Restoring the safety function associated with other LCO OUT-OF-TOLERANCES; or4. Remediating AC noncompliance CONDITIONS <p>LCO 3011 addresses responses to a SUSPEND OPERATIONS REQUIRED ACTION</p>
TECHNICAL SAFETY REQUIREMENTS (TSRs)	<p>TSRs define the LCOs, SRs, ACs, Design Features and BASES thereof necessary to protect the health and safety of the public and to reduce the potential risk to workers from the uncontrolled release of radioactive or other hazardous materials and from radiation exposure due to inadvertent criticality</p>
VIOLATION	<p>A VIOLATION of a TSR can occur as a result of any of the following circumstances</p> <ol style="list-style-type: none">1 Failure to perform REQUIRED ACTIONS within the specified COMPLETION TIME following<ol style="list-style-type: none">1) Failure to meet an LCO,<p><u>OR</u></p>2) Failure to successfully meet an LCO SR, <ol style="list-style-type: none">2 Failure to perform an LCO SR within the specified frequency, or3 Failure to perform the REQUIRED ACTIONS associated with an AC that is not being met within specified COMPLETION TIMES
WASTE MANAGEMENT FACILITY(IES)	

1. USE AND APPLICATION

1.2 ACRONYMS

AC	ADMINISTRATIVE CONTROL
Am	Americum
ANSI	American National Standards Institute
AOL	ADMINISTRATIVE OPERATING LIMIT
BIO	Basis for Interim Operation
CAS	Criticality Alarm System
CSE	Criticality Safety Evaluation
DOE	Department of Energy
DOT	Department of Transportation
FHA	Fire Hazards Analysis
HEPA	High Efficiency Particulate Air (filters)
IDC	Item Description Code
LCO	LIMITING CONDITION FOR OPERATION
LLW	Low-Level Waste
LS/DW	Life Safety/Disaster Warning
MAR	Material-at-Risk
NFPA	National Fire Protection Association
POC	Pipe Overpack Container
POD	Plan of the Day
RFFO	Rocky Flats Field Office
SAR	Safety Analysis Report
SC	System Category
Site	Rocky Flats Environmental Technology Site
SMP	Safety Management Program
SNM	Special Nuclear Material
SR	SURVEILLANCE REQUIREMENT
SSC	Structure, System, and Component
TRU	Transuranic (waste)
TSR	TECHNICAL SAFETY REQUIREMENTS
USQ	Unreviewed Safety Question
USQD	Unreviewed Safety Question Determination
WG Pu	Weapons Grade Plutonium
WMF	Waste Management Facility

1. USE AND APPLICATION

1.3 SAFETY LIMITS/LIMITING CONTROL SETTINGS

There are no Safety Limits or Limiting Control Settings for the any of the WASTE MANAGEMENT FACILITIES covered by these TSRs

1.4 LIMITING CONDITIONS FOR OPERATIONS/SURVEILLANCE REQUIREMENTS

LIMITING CONDITIONS FOR OPERATION (LCOs), presented in Section 3, are imposed on SAFETY STRUCTURES, SYSTEMS, AND COMPONENTS (SSCs) credited in the WMF SAR Safety Analysis to reduce the frequency or to mitigate the consequences of postulated accidents impacting the public and/or the collocated worker. The WASTE MANAGEMENT FACILITY LCOs address the following SAFETY SSCs

- Automatic Sprinkler System and Alarms
- Glovebox Fire Suppression System
- Filtered Exhaust Ventilation System
- Criticality Alarm System

SURVEILLANCE REQUIREMENTS (SRs), presented in Section 4, are requirements relating to testing, calibration, or inspection of SAFETY SSCs to ensure that the OPERABILITY of the LCO-related SAFETY SSCs and their support systems is maintained and/or that operations are within the specified parameters of LCOs. This section of the TSRs contains the requirements necessary to maintain WASTE MANAGEMENT FACILITY operations within the LCOs. In the event that SRs are not successfully completed or accomplished within their specified frequency, the SAFETY SSCs involved are assumed to be not OPERABLE and REQUIRED ACTIONS defined by the LCOs are taken until the SAFETY SSCs can be shown to be OPERABLE

1.5 ADMINISTRATIVE CONTROLS

ADMINISTRATIVE CONTROLS (ACs), presented in Section 5, are provisions relating to organization and management, inventory control and material management, maintenance and surveillance of System Category 3 (SC-3) Systems, Structures, and Components (SSCs), emergency response, and safety management programs necessary to ensure safe operation of WASTE MANAGEMENT FACILITIES. The ACs for WASTE MANAGEMENT FACILITIES are defined by CREDITED PROGRAMMATIC ELEMENTS and by specific controls/limits identified as ADMINISTRATIVE OPERATING LIMITS (AOLs)

AOLs are specific administrative controls/limits that have been credited in the WMF SAR Safety Analysis as providing a reduction in postulated accident scenario initiation frequency and/or a reduction in postulated accident consequences. Such controls are more precise and discrete than those defined by a SMP or the program attributes of a SMP. The AOLs are an administrative equivalent to hardware requirements specified in LCOs and, as such, have requirements for surveillance of the AOL and requirements for actions following DISCOVERY of a noncompliance with the AOL. Examples of AOLs include waste container specifications,

1. USE AND APPLICATION

limits on container radioactive material, and restriction of selected items (e g, combustibles, flammable gases)

1.6 DESIGN FEATURES

DESIGN FEATURES are the facility passive protective features that reduce the frequency and/or mitigate the consequences of uncontrolled releases of radioactive or other hazardous materials from the facility for postulated accident scenarios analyzed in the WMF SAR. These DESIGN FEATURE descriptions are provided in the TSRs to assure that evaluations of proposed changes or modifications to these DESIGN FEATURES are properly performed and documented, consistent with requirements specified in the TSRs

1.7 FREQUENCY NOTATION

The frequency notations, as used in surveillances and elsewhere, are defined as follows when included in the TSR.

Notation

Once per Working Shift

Once per Day

Once per Week

Once per Month

Once per Quarter

Once per Year

Minimum Frequency (Periodicity Notation)

At least once per Working Shift.

At least once per 24 hours.

At least once per 7 days.

At least once per 31 days.

At least once per 92 days

At least once per 12 months

1.8 TECHNICAL SAFETY REQUIREMENTS BASES CONTROL

The contractor may make changes to the TSR BASES without prior Department of Energy-Rocky Flats Field Office (DOE-RFFO) approval provided the changes do not involve any of the following

- 1 A change in controls specified in the TSRs, or
- 2 A change to the WASTE MANAGEMENT FACILITY authorization basis document that involves a positive USQ

Proposed changes that meet the criteria of (1) or (2) above shall be reviewed and approved by the DOE-RFFO prior to implementation. Changes to the BASES that may be implemented without prior DOE-RFFO approval will be provided to the DOE-RFFO during annual updates to this WMF SAR.

1. USE AND APPLICATION

1.9 LOGICAL CONNECTORS

Logic terms (AND, OR) may be used in the CONDITIONS, REQUIRED ACTIONS, or the COMPLETION TIME section of an LCO REQUIRED ACTION or AC REQUIRED ACTION statement or in the SURVEILLANCE REQUIREMENTS or frequency sections of the LCO SURVEILLANCE statement. The following definitions and format are applicable to the use of logic terms throughout the TSRs

NOTE: The defined terms of this section appear in CAPITALIZED, bolded, and underlined type throughout the TSRs.

Definitions of Logic Terms

<u>Term</u>	<u>Definition</u>
<u>AND</u>	Used to connect two or more sets of criteria that must both (all) be satisfied for a given logical decision.
<u>OR</u>	Used to denote alternate combinations or criteria, meaning either one or the other criterion will satisfy a given logical decision.

The formats for the level of logic are illustrated in the following examples.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
	For statements containing a single level – the connector is left justified to the column and the criteria are single numbered.	
1 The CONDITION	1 The REQUIRED ACTION <u>OR</u> 2 The REQUIRED ACTION	

This example demonstrates that for CONDITION 1, either REQUIRED ACTION 1 or REQUIRED ACTION 2 must be completed. This is because the logical connector OR is used.

1. USE AND APPLICATION

1.9 LOGICAL CONNECORS (continued)

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 The CONDITION	<p>For statements containing two levels:</p> <p>For the 1st level – The connector is <i>left justified to the column</i> and the criteria are <i>single numbered</i></p> <p>For the 2nd level – The connector is <i>indented once to the right</i> and the criteria are <i>double numbered</i></p> <p>1 The REQUIRED ACTION</p> <p><u>OR</u></p> <p>2 1 The REQUIRED ACTION</p> <p><u>AND</u></p> <p>2 2 The REQUIRED ACTION</p>	

This example demonstrates that for CONDITION 1, either REQUIRED ACTION 1 or REQUIRED ACTION 2 must be completed. If REQUIRED ACTION 2 1 is chosen, an additional requirement, indicated by the indented logical connector AND, is imposed. This additional requirement is met by performing REQUIRED ACTION 2 2.

1. USE AND APPLICATION

1.9 LOGICAL CONNECTORS (continued)

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 The CONDITION	For statements containing three levels:	
	For the 1 st level – The connector is <i>left justified to the column</i> and the criteria are <i>single numbered</i> .	
	For the 2 nd level – The connector is <i>indented once to the right</i> and the criteria are <i>double numbered</i> .	
	For the 3 rd level – The connector is <i>indented twice to the right</i> and the criteria are <i>triple numbered</i> .	
	1 The REQUIRED ACTION <u>OR</u> 2 1 The REQUIRED ACTION <u>AND</u> 2 2 1 The REQUIRED ACTION <u>OR</u> 2 2 2 The REQUIRED ACTION	

This example demonstrates that for CONDITION 1, either REQUIRED ACTION 1, or REQUIRED ACTION 2 1 must be completed. If 2 1 is chosen, an additional requirement, indicated by the indented logical connector AND, is imposed. This additional requirement is met by choosing 2 2 1 or 2 2 2. The indented position of the logical connector OR indicates that 2 2 1 and 2 2 2 are alternate and equal choices, one of which shall be performed.

2. SAFETY LIMITS AND LIMITING CONTROL SETTINGS

There are no Safety Limits or Limiting Control Settings for WASTE MANAGEMENT FACILITIES

EXAMPLE

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

A LIMITING CONDITION FOR OPERATION (LCO) and associated SURVEILLANCE REQUIREMENTS (SRs) have been identified for the following WASTE MANAGEMENT FACILITY SAFETY SSCs (1) Fire Suppression and Alarm Transmittal System, (2) Criticality Alarm System, and (3) HEPA filtration. The Fire Suppression and Alarm Transmittal System is credited in the WMF SAR Chapter 4 Safety Analysis to reduce the frequency of large fires in the building. As a result, the system indirectly reduces the consequences of analyzed accidents to the collocated workers and the public. The Criticality Alarm System is credited to reduce the consequences of a nuclear criticality to collocated workers. The HEPA Filtration System is credited as providing defense-in-depth protection to the collocated worker and public.

3.0/4.0 USE AND APPLICATION

LCO 3 0 1 through LCO 3 0 11 and SR 4 0 1 through SR 4 0 4 establish the general requirements applicable to LCO 3.1, Fire Suppression and Alarm Transmittal System, LCO 3.2, Criticality Alarm System, and LCO 3.3 HEPA Filtration at all times. A summary table of the general requirements or topics is presented below and is followed by a more detailed discussion of each general requirement and their BASES.

Table 1 Summary of LCO/SR General Requirements

LCO/SR	GENERAL REQUIREMENT / TOPIC	REMARKS
LCO 3 0 1	LCOs Shall Be Met	LCO Applicability Statements define when LCOs must be met. Refer to LCO 3 0 2 when LCOs cannot be met.
LCO 3 0 2	LCO REQUIRED ACTIONS Shall Be Met	REQUIRED ACTIONS must be completed for specified CONDITIONS. IF LCO CONDITION is remedied before REQUIRED ACTION COMPLETION TIME, REQUIRED ACTION does not have to be performed. Refer to LCO 3.0 3 when REQUIRED ACTION is not defined or cannot be met.
LCO 3 0 3	LCO REQUIRED ACTION Cannot Be Met Or Is Not Provided	When an LCO is not met, and the applicable REQUIRED ACTION(S) are not provided, the facility must SUSPEND OPERATIONS in the AFFECTED AREA(S) within 4 hours.
LCO 3 0 4	Return To Service	OPERABILITY tests of SAFETY SSCs or other equipment may be performed under administrative control without meeting applicable LCO REQUIRED ACTIONS. This is an exception to LCO 3 0 2.
LCO 3 0 5	Response to an LCO VIOLATION	LCO VIOLATIONS must be reported, corrective actions taken, and, if the LCO CONDITION still exists, operations must be suspended.
LCO 3 0 6	Calibration	Devices used to demonstrate compliance with LCOs must be calibrated. Entering LCO REQUIRED ACTIONS may be delayed for the lesser of 24 hours or the next SR inspection for installed devices found to be past due for calibration between SR inspections under certain conditions.

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

Table 1 Summary of LCO/SR General Requirements

LCO/SR	GENERAL REQUIREMENT / TOPIC	REMARKS
LCO 3 0 7	Performing SURVEILLANCE REQUIREMENTS	If an SR inspection or test would result in temporarily entering an LCO CONDITION, the applicable REQUIRED ACTIONS may not have to be entered. This is an exception to LCO 3 0 2
LCO 3 0 8	Planned OUT-OF-TOLERANCES	If an activity would result in entering an LCO CONDITION, the applicable REQUIRED ACTIONS must be entered before performing the activity. This also applies to significant risk SR inspections or tests covered by LCO 3 0 6
LCO 3 0 9	Response To An EMERGENCY EVACUATION	LCO specified times for SRs or REQUIRED ACTIONS can be extended for the duration of an EMERGENCY EVACUATION from a facility. This is an exception to LCO 3 0 2 and SR 4 0 1
LCO 3 0 10	Initiation Of REQUIRED ACTIONS	REQUIRED ACTION(S) shall be initiated when a CONDITION is DISCOVERED and shall be completed within the allowable COMPLETION TIME(S).
LCO 3 0 11	Suspending Operations	Any activity that can be placed in a safe configuration shall be terminated within the REQUIRED ACTION COMPLETION TIME.
SR 4 0 1	SRs Shall Be Met	LCO Approval/holding Statements or SRs define when SRs must be met. REQUIRED ACTIONS must be entered upon failure to meet an SR. LCO-related SAFETY SSCs must meet applicable SRs before being declared OPERABLE.
SR 4 0 2	Frequencies	SRs define inspection/test frequencies that must be met. Refer to SR 4 0 3 when SR frequencies are not met.
SR 4 0 3	Surveillance is not performed within the specified frequency	Failure to perform an SR within the specified frequency shall constitute a failure to meet OPERABILITY requirements for an LCO and results in a TSR/SR VIOLATION

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

LCO 3.0.1 LCOs Shall Be Met

LCOs shall be met during the specified operating configurations and in the specified areas/locations in the Applicability Statements, except as provided in LCO 3 0 2

LCO 3.0.2 LCO REQUIRED ACTION Shall Be Met

Upon DISCOVERY of a failure to meet an LCO, the associated REQUIRED ACTION(S) shall be met. If the LCO is restored before expiration of the specified COMPLETION TIME(S), completion of the REQUIRED ACTION(S) is not required, unless otherwise stated

LCO 3.0.3 LCO REQUIRED ACTION Cannot Be Met Or Is Not Provided

When an LCO is not met, and the applicable REQUIRED ACTION(S) are not provided (i.e., no CONDITION or combination of CONDITIONS stated in the Actions corresponds exactly to the actual CONDITION of the facility), the facility shall SUSPEND OPERATIONS in the AFFECTED AREA(S) within 4 hours. Actions taken to SUSPEND OPERATIONS shall be initiated upon the determination that the LCO is not met. Completion of SUSPEND OPERATIONS in the AFFECTED AREA(S) within the 4 hour COMPLETION TIME constitutes taking the REQUIRED ACTION for the actual CONDITION and no VIOLATION is declared

When the LCO can be met or a provided REQUIRED ACTION becomes applicable, completion of the REQUIRED ACTION in LCO 3 0 3 is not required

This LCO may also be used as an alternate REQUIRED ACTION for LCO __, CONDITION __

LCO 3.0.4 Return To Service

Equipment removed from service or declared not OPERABLE may be returned to service to perform testing required to demonstrate its OPERABILITY. This is an exception to LCO 3 0 2 for the system returned to service to perform the testing required to demonstrate OPERABILITY

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

LCO 3.0.5 Response To An LCO VIOLATION

Upon DISCOVERY of a VIOLATION, the following ACTIONS are required

- 1) SUSPEND OPERATIONS in AFFECTED AREAS
- 2) Notify the DOE-RFFO in accordance with approved procedures
- 3) Prepare an occurrence report in accordance with the approved procedures
- 4) Prepare and implement a recovery plan describing the steps leading to compliance

LCO 3.0.6 Calibration

Measurement devices used to demonstrate compliance with LCOs shall be calibrated to plant design, manufacturer's specification and/or industry standards as determined by engineering.

Calibration that requires removal of equipment from service does not constitute failure to meet an LCO if individual calibration procedures describe appropriate limitation beyond which an OUT-OF-TOLERANCE CONDITION would exist. If such limitations are not described in the individual calibration procedures, a planned OUT-OF-TOLERANCE shall be declared before removing equipment from service for calibration.

If an installed indicator is reading as expected and within required parameters, but is found to be past due for calibration during the interval between required SURVEILLANCES, and redundant indication is not available, declaring the applicable LCO not met may be delayed for up to 24 hours, or the interval of the SURVEILLANCE, whichever is shorter, from the time it is DISCOVERED that the indicator is past due for calibration. This delay period is permitted to allow the installation of a calibrated substitute or to calibrate the installed indicator, which allows validation of the actual operating parameter. The failure of a calibration requires that the affected SAFETY SSC be declared OUT-OF-TOLERANCE, and the LCO REQUIRED ACTIONS taken, as the minimum requirements described for the associated LCO that cannot be met. Reporting of the failed calibration is required in accordance with contractor procedures.

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

If the in-calibration indicator reading is not taken within the delay period, the LCO shall not met, and the COMPLETION TIMES of the REQUIRED ACTIONS for the applicable LCO CONDITIONS shall begin immediately upon expiration of the delay period. If the in-calibration indicator reading is outside required parameters within the delay period, the LCO shall not be met and the applicable REQUIRED ACTIONS shall be entered. The COMPLETION TIMES of the REQUIRED ACTIONS begin immediately upon observing the unsatisfactory reading with an in-calibration indicator.

LCO 3.0.7 Performing SURVEILLANCE REQUIREMENTS

An SR inspection or test that requires removal of equipment from service or that causes an LCO specification to be exceeded does not constitute failure to meet an LCO provided that individual work control documents implementing these inspections or tests describe appropriate limitations beyond which an OUT-OF-TOLERANCE CONDITION would exist.

Failing an LCO-required SR requires the system component to be deemed not OPERABLE and the appropriate REQUIRED ACTIONS be taken.

If it is determined that LCO-required equipment is not OPERABLE during the performance of an inspection or test, the appropriate REQUIRED ACTIONS shall be taken.

LCO 3.0.7 BASIS

LCO 3.0.7 allows the testing of LCO-related SAFETY SSCs and supporting equipment under administrative or procedural controls without declaring that LCO requirements are not met and entering the REQUIRED ACTIONS of an LCO. The sole purpose of LCO 3.0.7 is to provide an exception to LCO 3.0.2 to allow the performance of SR inspections/tests that require removing equipment from service or temporarily failing to meet LCO requirements as part of the required inspection or testing. This exception is not intended to place the facility at risk as an operational convenience. The removal of LCO-related SAFETY SSCs or supporting equipment from service and the inspection or testing of SAFETY SSCs or supporting equipment that results in not meeting LCO requirements, without first entering the REQUIRED ACTIONS of the LCO as a planned OUT-OF-TOLERANCE, should be evaluated to determine the level of risk associated with the performance of the SR inspection or test. If the impact of the SR inspection/test on facility risk is significant (as determined by facility management), the inspection/testing associated with the SR should be performed as a planned OUT-OF-TOLERANCE under LCO 3.0.8. If the impact of the SR inspection/test on facility risk is low, the inspection/testing associated with the SR may be performed without entering the LCO REQUIRED ACTIONS corresponding to the loss of the equipment.

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

Administrative or procedural controls must ensure that the time associated with removing the equipment from service to perform the inspection/test, which may conflict with the requirements of LCO REQUIRED ACTIONS, is limited to the time absolutely necessary to perform the SR inspection or test. Also, the administrative or procedural controls must restrict the activity to performance of only the SR inspection/test. LCO 307 is not to be used to perform any inspections or testing outside of the activities directly associated with performing the SR inspection or test. Individual SR procedures are required to provide appropriate limitations to ensure that the safety of the facility is maintained while testing any attributes of LCO-related SAFETY SSCs.

The failure of an SR requires that the affected SAFETY SSC is deemed not OPERABLE, that an LCO CONDITION is declared, and that the corresponding LCO REQUIRED ACTIONS are taken. Failure of an SR indicates that the minimum requirements to demonstrate compliance with the LCO are not being met. Reporting of the failed SR is required in accordance with Occurrence Reporting requirements.

LCO 3.0.8 Planned OUT-OF-TOLERANCES

If the performance of a planned activity will result in noncompliance with the requirements of an LCO, then the applicable LCO REQUIRED ACTION(S) shall be implemented prior to performing the activity. Prior to entering this planned OUT-OF-TOLERANCE CONDITION, the DOE-RFFO shall be notified in accordance with approved procedures.

Planned OUT-OF-TOLERANCES do not require post-activity reporting.

LCO 3.0.9 Response To An EMERGENCY EVACUATION

Failure to initiate or complete an SR or a REQUIRED ACTION resulting from an OUT-OF-TOLERANCE CONDITION due to an EMERGENCY EVACUATION within a WASTE MANAGEMENT FACILITY does not constitute a VIOLATION of the TSR. However, upon authorized resumption of normal operations, the SR or REQUIRED ACTION must be initiated and completed as soon as practicable.

LCO 3.0.10 Initiation of REQUIRED ACTIONS

REQUIRED ACTION(S) shall be initiated when a CONDITION is DISCOVERED and completed as soon as practicable within the allowed COMPLETION TIME. COMPLETION TIMES shall not be used for operational convenience.

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

LCO 3.0.11 Suspending OPERATIONS

Any activity that can be placed in a safe configuration within the REQUIRED ACTION COMPLETION TIME shall be terminated. Activities that require more time than specified for the REQUIRED ACTION to be placed in a safe configuration will have had a termination sequence formally initiated as soon as practicable. In any case, each activity underway at the time of suspension of operations should be terminated as soon as a safe configuration has been reached, and no additional time should be used for operational convenience.

Facility management shall determine activities to be continued for the purpose of maintaining a safe facility configuration, weighing worker and public safety risk that may arise from the suspension or other OUT-OF-TOLERANCE

SR 4.0.1 SRs Shall Be Met

SRs shall be met during the specified operating conditions in the Applicability Statements for individual LCOs unless otherwise stated in the SR.

SR 4.0.2 Frequencies

Each SR inspection or test shall be performed within 1.25 of the specified frequency. Use of the 25% grace period does not extend the due date for the next SURVEILLANCE period.

SR 4.0.3 ~~SURVEILLANCE~~ is not performed within the specified frequency

Failure to perform an SR within the specified frequency (TSR VIOLATION) shall constitute a failure to meet OPERABILITY requirements for an LCO. Exceptions are stated in the individual SRs and LCO 3.0.9. Surveillances do not have to be performed on equipment that is not OPERABLE or when the equipment has been designated OUT-OF-SERVICE.

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

3.1 AUTOMATIC SPRINKLER SYSTEM

LCO: The WASTE MANAGEMENT FACILITY Automatic Sprinkler System and Alarm Transmittal Systems shall be OPERABLE.

APPLICABILITY:

LCO 3.1 CONDITION APPLICABILITY	BUILDING								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX ¹	RCRA UNITS
CONDITION A								X	
CONDITION B		X	X	X				X	
CONDITION C		X	X	X				X	
CONDITION D								X	
SR 4.1.1		X	X	X				X	
SR 4.1.2		X	X	X				X	
SR 4.1.3								X	
SR 4.1.4		X	X	X				X	
SR 4.1.5		X	X	X				X	
SR 4.1.6		X	X	X				X	
SR 4.1.7								X	
SR 4.1.8								X	

¹ BUILDING 991 COMPLEX applicability includes the Waste Container Storage Areas, Office Areas, Building 998 (Room 300 and Corridor A), West Dock Canopy Area, East Dock Canopy Area, and in Building 996 (Corridor B and Vault 996).

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Automatic Sprinkler System not OPERABLE in office areas	A.1 Establish a fire watch in accordance with Site requirements in the WASTE MANAGEMENT FACILITY office area.	4 hours
	<u>AND</u> A.2 Terminate all hot work in the Office Areas	2 hours
B. Automatic Sprinkler System not OPERABLE in waste storage areas	B.1 Establish a fire watch in accordance with Site requirements in the AFFECTED AREAS <u>AND</u>	4 hours

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B 2 SUSPEND OPERATIONS in AFFECTED AREAS	2 hours
C Loss of Automatic Sprinkler System Flow Alarm transmittal capability to the Fire Department	C 1 Establish a fire watch in accordance with Site requirements in AFFECTED AREAS	4 hours
	<u>AND</u>	
	C 2 Terminate all hot work in AFFECTED AREAS.	2 hours
	<u>AND</u>	
	C 3 SUSPEND OPERATIONS in AFFECTED AREAS.	4 hours.
D Loss of smoke detector alarm transmittal capability to the CAS and FDC	D.1 Establish a fire watch in accordance with Site requirements in AFFECTED AREAS.	4 hours.
	<u>AND</u>	
	D 2 SUSPEND OPERATIONS in AFFECTED AREAS.	4 hours

3.1/4.1 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

4.1 SURVEILLANCE REQUIREMENTS: AUTOMATIC SPRINKLER SYSTEMS AND ALARMS

SURVEILLANCE REQUIREMENT	FREQUENCY
SR 4 1 1 Verify correct positioning of post indicating valves (PIVs) and sprinkler control valves	Once per month.
SR 4 1 2 Verify adequate static pressure in Sprinkler System Riser	Once per month.
SR 4 1 3 Verify adequate air pressure in dry Automatic Sprinkler Systems	Once per month.
SR 4 1 4 Perform a main drain flow test at Sprinkler System Riser	Once per quarter
SR 4 1 5 Perform a water flow alarm test at an inspector's test connection and verify Sprinkler system alarm transmittal to the Fire Department.	Once per quarter
SR 4 1 6 Perform a visual inspection of the sprinkler system.	Once per year
SR 4 1 7 Perform operational tests of dry pipe Automatic Sprinkler Systems.	Once per year
SR 4 1 8 Verify that the smoke detection system transmits to the CAS and FDC	Once per year

3.2/4.2 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

3.2 GLOVEBOX FIRE SUPPRESSION

LCO: The glovebox shall have an OPERABLE Automatic Sprinkler System.

APPLICABILITY:

LCO 3.2 CONDITION APPLICABILITY	BUILDING								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX ¹	RCRA UNITS
CONDITION A									
CONDITION B									
CONDITION C									
SR 4.2.1									
SR 4.2.2									
SR 4.2.3									

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
A.	A.1	
B.	B.1	
C	C.1	

4.2 SURVEILLANCE REQUIREMENTS: GLOVEBOX FIRE SUPPRESSION SYSTEM

SURVEILLANCE REQUIREMENT	FREQUENCY
SR 4.2.1	
SR 4.2.2	
SR 4.2.3	

3.3/4.3 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

3.3 FILTERED EXHAUST VENTILATION SYSTEM

LCO: The Filtered Exhaust Ventilation System Shall Be OPERABLE.

APPLICABILITY:

LCO 3.3 CONDITION APPLICABILITY	BUILDING								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX ¹	RCRA UNITS
CONDITION A									
CONDITION B									
CONDITION C									
SR 4 3 1									
SR 4 3 2									
SR 4 3 3									

¹ At all times in the Building 991 Waste Container Storage Areas other than Room 166 Differential pressure requirements for Room 170 are not applicable for normal differential pressure fluctuations (≤ 5 minutes in duration).

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
A.		
B		
C		

4.3 SURVEILLANCE REQUIREMENTS: FILTERED EXHAUST VENTILATION SYSTEM

SURVEILLANCE REQUIREMENT	FREQUENCY
SR 4 3 1	
SR 4 3 2	
SR 4 3 3	

3.4/4.4 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

3.4 GLOVEBOX FILTERED EXHAUST VENTILATION

LCO: The Glovebox Filtered Exhaust Ventilation System Shall Be OPERABLE.

APPLICABILITY:

LCO 3 4 CONDITION APPLICABILITY	BUILDING								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX ¹	RCRA UNITS
CONDITION A									
CONDITION B									
CONDITION C									
SR 4 4 1									
SR 4 4 2									
SR 4 4 3									

1 At all times in the Building 991 Waste Container Storage Areas other than Room 166 Differential pressure requirements for Room 170 are not applicable for normal differential pressure fluctuations (≤ 5 minutes in duration).

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
A.		
B		
C		

4.4 SURVEILLANCE REQUIREMENTS: FILTERED EXHAUST VENTILATION SYSTEM

SURVEILLANCE REQUIREMENT	FREQUENCY
SR 4 4 1	
SR 4 4 2	
SR 4 4 3	

3.5/4.5 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

3.5 LCO: CRITICALITY ALARM SYSTEM

LCO: The building shall have an **OPERABLE** Nuclear Criticality Alarm System consisting of:

1. Neutron detectors,
2. Criticality alarm panel,
3. Criticality alarm beacons at building entrances, and
4. Life Safety/Disaster Warning (LS/DW) system consisting of amplifiers, criticality alarm system tone signal generator, priority relays, and speakers.

APPLICABILITY:

LCO 3.1 CONDITION APPLICABILITY	BUILDING								
	NEW WMF	440	569	664 COMPLEX	666	750/904	986	991 COMPLEX ¹	RCRA UNITS
CONDITION A			X					X	
CONDITION B			X					X	
CONDITION C			X					X	
CONDITION D			X					X	
CONDITION E			X					X	
CONDITION F			X					X	
SR 4.4.1			X					X	
SR 4.4.2			X					X	
SR 4.4.3			X					X	
SR 4.4.4			X					X	
SR 4.4.5			X					X	

1 BUILDING 991 COMPLEX applicability includes Building 984

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
A One criticality alarm system detector is not OPERABLE	A 1 Restore the criticality alarm system detector to an OPERABLE condition	15 days
B The REQUIRED ACTION and associated COMPLETION TIME of CONDITION A not met	B 1 Conduct a controlled evacuation in accordance with the Building Emergency Response Operations procedure	1 hour

3.5/4.5 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
C Building is determined to not be covered by at least two neutron detectors (More than one criticality alarm system detector is not OPERABLE)	C 1 Conduct a controlled evacuation in accordance with the Building Emergency Response Operations procedure	1 hour
D LS/DW criticality alarm not OPERABLE	D 1 Conduct a controlled evacuation in accordance with the Building Emergency Response Operations procedure	1 hour
E Exterior criticality alarm beacon(s) not OPERABLE	E 1 Control inadvertent entry into the affected entrance(s)	1 hour
F Loss of electrical power to criticality alarm panel and/or LS/DW	F 1 Conduct a controlled evacuation in accordance with the Building Emergency Response Operations procedure	1 hour
G Alarm capability to Central Alarm System not operable	G 1 Station a watch to continuously monitor the criticality alarm panel to detect and report local criticality alarm or trouble alarm annunciation	2 hours

3.5/4.5 LIMITING CONDITIONS FOR OPERATION/SURVEILLANCE REQUIREMENTS

4.5 SURVEILLANCE REQUIREMENTS: CRITICALITY ALARM SYSTEM

SURVEILLANCE REQUIREMENT	FREQUENCY
SR 4 5 1 Test each detector to verify response to a neutron source and test coincidence circuitry by activating two detectors and verifying that the system latches into alarm mode	Once per month
SR 4 5 2 Perform criticality alarm tone generator test	Once per month
SR 4 5 3 Verify that external criticality alarm beacons activate when the criticality alarm system is in the alarm mode	Once per month.
SR 4 5 4 Verify that no trouble alarm is indicated at the Criticality Alarm Panel	Once per month.
SR 4 5 5 Verify that the LS/DW system provides adequate annunciation of the criticality aural alarms	Once per year

5. ADMINISTRATIVE CONTROLS

5.0 USE AND APPLICATION

AC 5.0 General Application

ADMINISTRATIVE CONTROL 5 0 only applies to individual failures against CREDITED PROGRAMMATIC ELEMENTS in AC 5 1 through AC 5 5 and does not apply to other aspects of SMPs in AC 5 6

AC 5.0.1 ACs Shall Be Met At All Times, Unless Otherwise Specified

AC deviations may occur at three levels individual failures, programmatic deficiencies, and AC VIOLATIONS

AC 5.0.2 AC Individual Failure

Individual failures to comply with a CREDITED PROGRAMMATIC ELEMENT of an AC, which are isolated and not systemic in nature, do not constitute non-compliance with the AC Individual failures, deemed to be systemic in nature, are addressed under AC 5 0 3, AC Programmatic Deficiency

An individual failure of an AC limit (*i.e.*, Specific Control or Restriction) and its action statement is an AC VIOLATION

AC 5.0.3 AC Programmatic Deficiency

The CREDITED PROGRAMMATIC ELEMENTS in each AC are the standards by which the adequacy of the AC is assessed The programmatic ACs may be implemented by specific Site Integrated SMP elements or through a building-specific program

An AC programmatic deficiency occurs when

- a The same non-compliance or a closely similar non-compliance continues to occur, indicating the corrective action, including root cause determination, has not been effective,
- b Several non-compliances have occurred that are related but not identical, indicating a common breakdown in a program or program area, or
- c Intentional violation or misrepresentation (typically a failure to perform a substantive activity required by nuclear safety requirements coupled with the alteration, concealment, or destruction of documents pertaining to those activities) as determined by the PAAA Program

Additional information on determining programmatic deficiency is included in the BASES, Section 5 0

5. ADMINISTRATIVE CONTROLS

AC 5.0.3 An AC programmatic deficiency shall require the following actions
(cont)

- a Notify DOE-RFFO of the programmatic deficiency in accordance with Occurrence Reporting and PAAA requirements,
- b Conduct a root cause analysis to identify the corrective actions to ensure future compliance with the AC requirement and prevent recurrence,
- c Inform DOE-RFFO of root cause analysis and corrective actions in accordance with Occurrence Reporting requirements, and
- d Implement corrective actions

AC 5.0.4 AC VIOLATION

An AC VIOLATION occurs when

- a There is a programmatic deficiency involving a CREDITED PROGRAMMATIC ELEMENT, or
- b An AC limit (i.e. Specific Control or Restriction) and its action statement are not met

Upon identification that an AC VIOLATION exists, the following actions are required

- a Ensure a safe facility configuration for violations associated with Specific Controls or Restrictions (i.e., suspension of operations – refer to BASES for guidance), and
- b Notify DOE-RFFO of the VIOLATION in accordance with occurrence reporting requirements.

AC 5.0.5 Compliance Exception

Establishes an exception to mandatory compliance with requirements in the ACs when designated SSCs or areas have been OUT OF COMMISSION in accordance with the CONDITION(s) specified in the TSR definition section. OUT OF COMMISSION SSCs or areas may be considered to be administratively removed from the WASTE MANAGEMENT FACILITY and are no longer subject to the TSR requirements

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 The minimum staffing requirements not met.	1 Restore staffing to minimum requirements	4 hours
	<u>OR</u> 2 1 Make appropriate notifications within the facility and to the Site Shift Superintendent.	4 hours
	<u>AND</u> 2 2 SUSPEND OPERATIONS in the AFFECTED AREA(s)	4 hours
2 Notification that Fire Department does not have minimum staffing required to respond to a fire at or within the WASTE MANAGEMENT FACILITY	1 SUSPEND OPERATIONS in AFFECTED AREA(s)	4 hours
	<u>AND</u> 2 Terminate all hot work in the building.	4 hours

5.1.4 SURVEILLANCE REQUIREMENTS

None

5. ADMINISTRATIVE CONTROLS

5.2 INVENTORY CONTROL AND MATERIAL MANAGEMENT

5.2.1 Requirements for Inventory Control and Material Management

A program shall be established, implemented and maintained to protect NUCLEAR MATERIAL and radioactive and other hazardous material, and to control storage configurations, locations and quantities in accordance with the limits analyzed in the hazard and accident analysis

5.2.2 CREDITED PROGRAMMATIC ELEMENTS

The program shall include the following CREDITED PROGRAMMATIC ELEMENTS

- a Configuration, location, and quantities of NUCLEAR MATERIAL (excluding holdup) and radioactive and other hazardous material are controlled (*e g*, quantity per container, storage location, stack height),
- b NUCLEAR MATERIAL (including fissile solutions if applicable) is packaged and stored in Site approved containers,
- c Inspections are performed to detect degradation of NUCLEAR MATERIAL containers, and
- d Containers (*e g*, drums, piping, bottles and tanks) that require venting and purging are identified, and venting and purging (if required) are performed where combustible gas generation is possible.

5.2.3 Specific Controls or Restrictions

The program shall have the inventory control and material management control limits noted in the following AOLs

5. ADMINISTRATIVE CONTROLS

AOL 1 CONTAINER INTEGRITY

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 1.1	X	X	X	X	X	X	X	X	X
AOL 1.2		X	X	X		X	X	X	

CONTROLS/RESTRICTIONS:

AOL 1.1 POCs and waste containers received at and stored in the WASTE MANAGEMENT FACILITY shall meet on-site transportation requirements.

AOL 1.2 Wooden LLW crates received at and stored in the WASTE MANAGEMENT FACILITY shall contain plastic liners per Site procedures.

POCs and waste container integrity is a part of meeting the specifications. All POCs and/or waste containers received at the WASTE MANAGEMENT FACILITY dock shall be verified to be compliant with this requirement either *before shipment* to the WASTE MANAGEMENT FACILITY or *at receipt*.

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 POC or waste container does not meet on-site transportation requirements or wooden LLW crate does not contain a plastic liner when received	1 Segregate the non-compliant POC, waste container, or wooden waste crate	1 hours
	<u>AND</u> 2 Develop and begin implementation of an action plan defining necessary short-term compensatory measures and final disposition of the non-compliant POC, waste container, or wooden LLW crate	24 hours
	<u>AND</u> 3 Bring the non-compliant POC, waste container, or wooden waste crate into compliance or remove from the WASTE MANAGEMENT FACILITY	1 week.

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
2 Discovery that waste container does not meet on-site transportation requirements	1 Segregate the non-compliant waste container	8 hours
	<u>AND</u> 2 Develop and begin implementation of an action plan defining necessary short-term compensatory measures and final disposition of the non-compliant waste container	24 hours
	<u>AND</u> 3 Bring the non-compliant waste container into compliance or remove from the WASTE MANAGEMENT FACILITY	1 week.

5. ADMINISTRATIVE CONTROLS

AOL 2 SPECIAL NUCLEAR MATERIAL STAGING

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 2.1								X	
AOL 2.2								X	

CONTROLS/RESTRICTIONS:

AOL 2.1 SNM containers staged in the WASTE MANAGEMENT FACILITY shall meet Type B shipping container certification.

AOL 2.2 SNM containers shall only be staged in vaults in the WASTE MANAGEMENT FACILITY.

All SNM containers received at the WASTE MANAGEMENT FACILITY dock shall be verified to be compliant with this requirement either *before shipment* to the WASTE MANAGEMENT FACILITY or *at receipt*.

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 SNM container does not meet Type B shipping container certification requirements when received	1 Remove the non-compliant SNM container from the WASTE MANAGEMENT FACILITY	4 hours
2 Discovery that a SNM container is not stored inside a vault in the WASTE MANAGEMENT FACILITY	1 Notify facility management of a SNM container(s) outside a vault. <u>AND</u> 2 Move the non-compliant staged SNM container into a vault or remove from the WASTE MANAGEMENT FACILITY	1 hour 1 week

5. ADMINISTRATIVE CONTROLS

AOL 3 VENTED CONTAINERS

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 3.1	X	X	X	X		X	X	X	

AOL 3.1 Metal waste containers received at and stored in the WASTE MANAGEMENT FACILITY shall be vented.

All metal containers received at the WASTE MANAGEMENT FACILITY dock shall be verified to be compliant with this requirement either *before shipment* to the WASTE MANAGEMENT FACILITY or *at receipt*

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Metal waste container does not have a vent when received.	1 Segregate the unvented metal waste container	4 hours
	<u>AND</u> 2 Remove the unvented metal waste container from the WASTE MANAGEMENT FACILITY	24 hours
2 Discovery that metal waste container is not vented while in container storage area.	1 Segregate the unvented metal waste container	8 hours
	<u>AND</u> 2 Remove the unvented metal waste container from the WASTE MANAGEMENT FACILITY	72 hours

5. ADMINISTRATIVE CONTROLS

AOL 4 CONTAINER/BUILDING FISSILE MATERIAL LOADING

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 4 1	X	X	X	X	X	X	X	X	X
AOL 4 2	X	X	X	X		X	X	X	
AOL 4 3	X			X		X		X	
AOL 4 4									
AOL 4 5			X						
AOL 4 6			X						
AOL 4 7			X						
AOL 4 8		X							
AOL 4 9					X	X			X
AOL 4 10									
AOL 4 11						X			

CONTROLS/RESTRICTIONS:

- AOL 4.1** The quantities of radioactive material in LLW drums and LLW crates received at and stored in the WASTE MANAGEMENT FACILITY shall not exceed 0.5 grams Weapons Grade Plutonium equivalent and 3 grams Weapons Grade Plutonium equivalent, respectively.
- AOL 4.2** The quantities of radioactive material in TRU waste drums and TRU waste crates received at and stored in the WASTE MANAGEMENT FACILITY shall not exceed 200 grams Weapons Grade Plutonium equivalent and 320 grams Weapons Grade Plutonium equivalent, respectively.
- AOL 4.3** The quantities of radioactive material in POC containers received at and stored in the WASTE MANAGEMENT FACILITY shall not exceed either 1,255 grams Weapons Grade Plutonium equivalent or 200 grams of (Criticality Safety approved amount) fissionable material.
- AOL 4.4** POC containers received at and stored in the WASTE MANAGEMENT FACILITY shall have been generated from the residue stabilization and repackaging process with a representative bounding 1% respirable fraction (RF).
- AOL 4.5** The quantity of radioactive material in residue drums stored in the WASTE MANAGEMENT FACILITY shall not exceed 1,100 grams Weapons Grade Plutonium equivalent/residue drum.

5. ADMINISTRATIVE CONTROLS

CONTROLS/RESTRICTIONS:

- AOL 4.6 The total quantity of radioactive material in residue drums stored in the WASTE MANAGEMENT FACILITY shall not exceed 11,000 grams Weapons Grade Plutonium equivalent.
- AOL 4.7 The total quantity of radioactive material loaded on a single transport truck received at the WASTE MANAGEMENT FACILITY shall not exceed 15,000 grams Weapons Grade Plutonium equivalent.
- AOL 4.8 The total quantity of radioactive material (excludes POCs) loaded on two (2) transport trucks received at the WASTE MANAGEMENT FACILITY shall not exceed 60 TRU/TRM waste drums;

OR

a maximum total inventory of 6,000 grams of weapons grade plutonium equivalent in metal containers (excludes POCs).

- AOL 4.9 For a WASTE MANAGEMENT FACILITY categorized as a Hazard Category 3 Nuclear Facility, the total quantity of LLW/LLMW shall not exceed the upper Category 3 threshold value documented in DOE-SID-1027. If more than one radionuclide is present, the sum of the ratios of the quantity of each radionuclide to the upper Category 3 threshold value shall be less than 1.
- AOL 4.10 The total quantity of radioactive material in the WASTE MANAGEMENT FACILITY shall not exceed 10,000 grams Weapons Grade Plutonium equivalent.
- AOL 4.11 The total quantity of radioactive material in the WASTE MANAGEMENT FACILITY tent structure shall not exceed 250 grams Weapons Grade Plutonium equivalent.

NOTE For the purpose of complying with this AOL, residue drums are defined as waste containers that are packaged with greater than 200 grams WG Pu. Residue drums packaged with less than 200 grams WG Pu are considered TRU waste and AOL 4.5 and 4.6 do not apply.

All POC and waste containers received at the WASTE MANAGEMENT FACILITY dock shall be verified to be compliant with this requirement either *before shipment* to the WASTE MANAGEMENT FACILITY or *at receipt*.

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Waste container does not meet inventory requirement when received	1 Terminate all container movements in the vicinity of the non-compliant container	10 minutes
	<u>AND</u> 2 If TRU/TRM waste, contact Criticality Safety to determine if the container is infracted if greater than 200 grams fissionable material	2 hours
	<u>AND</u> 3 Remove the non-compliant container from the WASTE MANAGEMENT FACILITY	If the container is not infracted, within 72 hours <u>OR</u> If the container is infracted, per direction of Criticality Safety
2 Discovery that waste container does not meet inventory requirement while in storage in the WASTE MANAGEMENT FACILITY	1 Terminate all container movements in the vicinity of the non-compliant container	10 minutes
	<u>AND</u> 2 If TRU/TRM waste, contact Criticality Safety to determine if the container is infracted if greater than 200 grams fissionable material	2 hours
	<u>AND</u> 3 Remove the non-compliant container from the WASTE MANAGEMENT FACILITY	If the container is not infracted, by the end of the day shift of the next regular work day following identification of a receiving facility <u>OR</u> If the container is infracted, per direction of Criticality Safety

5. ADMINISTRATIVE CONTROLS

AOL 4 EXCEPTIONS

The BUILDING 991 COMPLEX is assumed to initially contain one 55-gallon waste drum with a quantity of americium that is higher than that expected from the decay of ^{241}Pu in Weapons Grade Plutonium (WG Pu). This waste drum, identification number 84291, contains 208 grams WG Pu equivalent. It is assumed that no other waste drums containing more than 200 grams WG Pu equivalent are introduced into the BUILDING 991 COMPLEX prior to implementation of these TSRs.

5. ADMINISTRATIVE CONTROLS

AOL 5 COMPLIANCE WITH CRITICALITY SAFETY CRITERIA

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 5.1		X		X		X		X	

CONTROLS/RESTRICTIONS:

AOL 5.1 Waste containers (including SNM and POCs as applicable) received at, stored in, and staged in the WASTE MANAGEMENT FACILITY shall be compliant with all requirements specified in Criticality Safety Evaluation(s), including incredibility analyses.

All waste containers (including SNM and POCs as applicable) received at the WASTE MANAGEMENT FACILITY dock shall be verified to be compliant with this requirement either *before shipment* to the WASTE MANAGEMENT FACILITY or *at receipt*. The location and arrangement of the POC and waste containers in the WASTE MANAGEMENT FACILITY shall be verified to be compliant with this requirement on a *monthly* basis.

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Waste container does not meet the Criticality Safety Evaluation requirements when received.	1. Terminate all container movements in the vicinity of the non-compliant container <u>AND</u> 2. Contact Criticality Safety <u>AND</u> 3. Remove the non-compliant container from the WASTE MANAGEMENT FACILITY	10 minutes 2 hours Per direction of Criticality Safety
2 Discovery that stored waste container does not meet the Criticality Safety Evaluation requirements following the monthly verification.	1. Terminate all container movements in the vicinity of the non-compliant container(s) <u>AND</u> 2. Contact Criticality Safety <u>AND</u> 3. Remove the non-compliant container from the WASTE MANAGEMENT FACILITY or rearrange the container configuration in the WASTE MANAGEMENT FACILITY	10 minutes 2 hours Per direction of Criticality Safety

5. ADMINISTRATIVE CONTROLS

AOL 6 CONTAINER STACKING

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 6.1	X	X	X	X	X	X	X	X	X
AOL 6.2	X	X	X	X	X	X	X	X	X

CONTROLS/RESTRICTIONS:

AOL 6.1 All pallets of waste containers that are stacked to a third or forth tier shall be banded.

AOL 6.2 Waste containers shall not be stacked higher than 13 feet. Only like containers shall be stacked upon each other.

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Discovery that waste containers stacked on the third or fourth tier are not banded.	1 Remove the non-banded pallet of containers from the third or fourth tier	8 hours
	<u>OR</u> 2 Band the pallet of containers and replace in the third or fourth tier, if necessary	8 hours

5. ADMINISTRATIVE CONTROLS

AOL 7 OPERATIONS CONTROL PROGRAM

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 7 1								X	
AOL 7 2								X	
AOL 7 3									
AOL 7 4					X	X	X		X
AOL 7 5	X	X		X	X	X	X	X	X
AOL 7 6	X	X							
AOL 7 7	X	X	X	X	X	X	X		X
AOL 7 8				X					
AOL 7 9								X	
AOL 7 10								X	
AOL 7 11								X	
AOL 7 12	X		X	X		X		X	
AOL 7 13	X	X	X	X				X	
AOL 7 14	X	X	X	X	X			X	
AOL 7 15						X			

CONTROLS/RESTRICTIONS:

An operations control program shall be implemented. Attributes for the operations program include:

- Restrictions on the conduct of activities:

AOL 7.1 Operations, other than container receipt and shipment, shall not be conducted inside the BUILDING 991 south waste storage areas (Rooms 134, 145, 147, and 170) when a Room 170 dock door is open.

AOL 7.2 BUILDING 991 Room 170 differential atmospheric pressure compliance with LCO 3 2 will be verified prior to the conduct of any Room 134, 135, 147, or 170 operations, other than container receipt and shipment.

- Restrictions on waste types:

AOL 7.3 LLW shall not be stored in the WASTE MANAGEMENT FACILITY

AOL 7.4 TRU waste drums are prohibited from receipt and storage at the WASTE MANAGEMENT FACILITY

AOL 7.5 Residue drums packaged with greater than 200 grams weapons grade plutonium equivalent are prohibited from receipt and storage at the WASTE MANAGEMENT FACILITY

AOL 7.6 Wooden LLW crates are prohibited from receipt and storage at the WASTE MANAGEMENT FACILITY

5. ADMINISTRATIVE CONTROLS

CONTROLS/RESTRICTIONS:

- AOL 7.7 Hazardous Waste shall be managed in accordance with the RCRA Permit.
- AOL 7.8 TSCA Waste shall be managed in accordance with applicable regulations
- **Restrictions on containers stacking:**
- AOL 7.9 Type B shipping containers shall not be stacked in staging area.
- **Restrictions on container storage location:**
- AOL 7.10 Waste containers shall not be stored in BUILDING 991 COMPLEX Corridor C
- AOL 7.11 Only POCs shall be stored in BUILDING 991 COMPLEX Room 166
- **Restrictions on container contents and use:**
- AOL 7.12 Type B shipping containers, POCs, and TRU waste containers shall not be opened in the WASTE MANAGEMENT FACILITY
- AOL 7.13 Waste containers shall not contain liquids that can lead to significant hydrogen generation and/or metal waste container vent plugging.
- AOL 7.14 Pyrophoric material waste containers are prohibited from the WASTE MANAGEMENT FACILITY
- **Restrictions on the use of a *Perma-Con*:**
- AOL 7.15 A Perma-Con, when required to be used for ELW inspection, sampling, or repackaging activities, shall be declared OPERABLE prior to activity start.

All containers received by the WASTE MANAGEMENT FACILITY shall be verified to be compliant with the liquid content requirement either *before shipment* to the

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Operations requirement not met while container is at WASTE MANAGEMENT FACILITY dock.	1 If container with liquid or pyrophoric material, segregate the non-compliant container	1 hour
	AND	
	2 Develop and begin implementation of an action plan defining necessary short-term compensatory measures for the non-compliant container	24 hours
	AND	
	3 Remove the non-compliant container from the WASTE MANAGEMENT FACILITY	1 week.

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
2 Discovery that operations requirement not met while waste container is in storage in the WASTE MANAGEMENT FACILITY	1 If restricted container is stacked or restricted area has stacking, remove non-compliant stacked containers from stacks	8 hours
	<u>OR</u>	
	2 If containers are stored in a restricted area, remove the non-compliant container from restricted area.	8 hours
	<u>OR</u>	
	3 1 If container is open (other than by accident), develop and begin implementation of an action plan defining necessary short-term compensatory measures for open container	8 hours
	<u>AND</u>	
	3 2 Close and seal the open container	1 day
	<u>OR</u>	
	4 1 If container with liquid or pyrophoric material, segregate the non-compliant container	8 hours
	<u>AND</u>	
	4 2 Develop and begin implementation of an action plan defining necessary short-term compensatory measures for the non-compliant container	24 hours
	<u>AND</u>	
	4 3 Remove the non-compliant container from the WASTE MANAGEMENT FACILITY	1 week.
3 Discovery that Perma-Con is not OPERABLE during an inspection, sampling, or repackaging operation.	1 SUSPEND OPERATIONS and leave Perma-Con.	15 Minutes
	<u>AND</u>	
	2 Re-establish OPERABILITY prior to re-entering to continue inspection, sampling, or repackaging operations (if required)	Prior to re-entry

5. ADMINISTRATIVE CONTROLS

SURVEILLANCE REQUIREMENTS

As specifically stated for each AOL

EXAMPLE

5. ADMINISTRATIVE CONTROLS

5.3 CONTROL OF COMBUSTIBLE MATERIALS AND IGNITION SOURCES

5.3.1 Requirements for Control of Combustible Materials and Ignition Sources

A program shall be established, implemented, and maintained to control and verify combustible materials and ignition sources to ensure compliance with the limits analyzed in the hazard and accident analysis

5.3.2 CREDITED PROGRAMMATIC ELEMENTS

The program shall include the following CREDITED PROGRAMMATIC ELEMENTS

- a Combustible package spacing is maintained,
- b Spark, heat, or flame-producing work is controlled,
- c Combustible package size is controlled, and
- d Applicable corrective actions resulting from periodic Fire Protection inspection findings are implemented commensurate with their safety significance

APPLICABILITY These elements apply to solid combustible material not stored in metal containers and combustible/flammable liquids not stored in an approved manner. Class A combustible material that is $\leq 1 \text{ ft}^3$ in volume does not pose a fire hazard.

5.3.3 Specific Controls or Restrictions

The program shall have the combustible materials and ignition source control limits noted in the following AOL.

5. ADMINISTRATIVE CONTROLS

AOL 8 FUEL/COMBUSTIBLE LOADING

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 8.1	X	X	X	X	X	X	X	X	X
AOL 8.2	X	X	X	X	X	X	X	X	X
AOL 8.3	X	X	X	X	X	X	X	X	X
AOL 8.4	X	X	X	X	X	X	X	X	X
AOL 8.5	X	X	X	X		X	X	X	
AOL 8.6	X	X						X	
AOL 8.7	X	X	X	X		X	X	X	
AOL 8.8	X	X	X	X		X	X	X	
AOL 8.9			X						
AOL 8.10	X	X	X	X	X	X	X	X	X
AOL 8.11	X	X	X	X	X	X	X	X	X
AOL 8.12	X	X	X	X	X	X	X	X	X

CONTROLS/RESTRICTIONS:

A combustible material and ignition source control program shall be implemented in WASTE MANAGEMENT FACILITIES. Attributes for the combustible material and ignition source program include:

- Restrictions on high heat release rate combustible materials

AOL 8.1 Flammable/combustible liquids shall not be stored outside NFPA approved cabinets

AOL 8.2 Quantities of flammable/combustible liquids in excess of 2 gallons shall not be located in waste container storage areas without proper containment/confinement (e.g., dike, secondary container)

AOL 8.3 Quantities of plastic material (e.g., ldhe, hpde, etc.) which would yield more than 2 gallons of material when melted shall not be located in waste container storage areas without proper containment/confinement.

AOL 8.4 Fossil-fueled material handling vehicles shall not be used in interior waste container storage areas

- Restrictions on combustible loading

AOL 8.5 Wooden pallets shall not be used for waste container storage

AOL 8.6 No wooden crates shall be permitted in interior waste container storage areas

5. ADMINISTRATIVE CONTROLS

CONTROLS/RESTRICTIONS:

AOL 8.7 Combustible loading shall be maintained consistent with Fire Hazards Analysis categorization (Ref. A-Error! Bookmark not defined.) (i.e., very limited combustibles in waste container storage areas)

- **Restrictions on combustible material location**

AOL 8.8 Combustible materials shall remain separated from waste containers by at least five (5) feet.

AOL 8.9 Combustible materials shall remain separated from residue drums by at least ten (10) feet.

AOL 8.10 Flammable gas containers shall not be stored in the WASTE MANAGEMENT FACILITY

- **Restrictions on ignition sources**

AOL 8.11 Smoking shall not be permitted inside facilities containing waste container storage areas

AOL 8.12 Hot work shall be controlled by a permitting process

The combustible material and ignition source control program in the WASTE MANAGEMENT FACILITY shall be verified to be compliant with these requirements (as applicable) on a *monthly* basis.

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 High heat release rate combustible material requirement not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1.1 If excess flammable/combustible liquids or plastics, remove excess flammable/combustible liquid or plastic material from waste container storage area. OR	24 hours
	1.2 Meet requirements dealing with flammable/combustible liquids or plastic material in waste container storage area.	24 hours
	OR 2.1 If flammable/combustible liquids stored outside cabinets, remove improperly stored flammable/combustible liquid from applicable areas (see BASES) OR	4 hours
	2.2 Store flammable/combustible liquid in NFPA approved cabinet	4 hours
	OR 3 If fossil-fueled vehicle in storage area, remove fossil-fueled vehicle from interior of waste container storage area.	1 hour

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
2 Combustible loading requirement not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1 If wooden crate, remove wooden crate from interior waste container storage area	24 hours
	<u>OR</u> 2 If wooden pallet(s) used in storage, remove wooden pallet(s) from waste container storage application.	4 hours
	<u>OR</u> 3 If combustible loading increased over FHA categorization, reduce transient combustible loading in waste container storage area.	Per direction of Fire Protection.
3 Combustible material location requirement not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1 1 If combustibles within five (5) feet of containers, separate combustible material from waste containers	4 hours
	<u>OR</u> 1 2 Remove combustible material from waste container storage area.	4 hours
	<u>OR</u> 2 1 If combustibles within ten (10) feet of residue drum, separate combustible material from drum.	4 hours
	<u>OR</u> 2 2 Remove combustible material from waste container storage area.	4 hours
	<u>OR</u> 3 If flammable gas container stored in WASTE MANAGEMENT FACILITY, remove flammable gas container from applicable areas (see BASES)	1 hour
4 Ignition source control requirements not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1 1 If un-permitted hot work, terminate un-permitted hot work in applicable areas (see BASES)	1 hour
	<u>AND</u> 1 2 Meet any Fire Protection requirements dealing with hot work termination	Per Direction of Fire Protection.
	<u>OR</u> 2 If smoking in applicable areas (see BASES), extinguish smoking material	Immediately

5. ADMINISTRATIVE CONTROLS

AOL 9 FLAMMABLE GAS USE CONTROL

APPLICABILITY:

CONTROL/ RESTRICTION	WASTE MANAGEMENT FACILITY								
	NEW WMF	440	569	664 COMPLEX	666	750/904	906	991 COMPLEX	RCRA UNITS
AOL 9.1	X	X	X	X	X	X	X	X	X
AOL 9.2	X	X	X	X	X	X	X	X	X
AOL 9.3	X	X	X	X	X	X	X	X	X
AOL 9.4	X	X	X	X	X	X	X	X	X
AOL 9.5								X	

CONTROLS/RESTRICTIONS:

A flammable gas use control program shall be implemented in the WASTE MANAGEMENT FACILITY. Attributes for the flammable gas program include:

- Restrictions on flammable gas containers

AOL 9.1 Flammable gas containers shall meet DOE requirements

AOL 9.2 Flammable gas container (fully charged) contents shall not exceed a maximum gas volume of 150 cubic feet.

- Restrictions on flammable gas container location and use

AOL 9.3 Flammable gas containers shall not be placed within five (5) feet of radioactive material containers

AOL 9.4 Flammable gas containers shall not be taken into unauthorized waste container storage areas

AOL 9.5 Flammable gas shall not be used in vaults while SNM is present.

The flammable gas use control program in the WASTE MANAGEMENT FACILITY shall be verified to be compliant with these requirements on a *monthly* basis

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Flammable gas container requirements not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1 If flammable gas container is non-compliant with DOT requirements, remove non-compliant flammable gas container from applicable areas (see BASES)	1 hour
	<u>OR</u> 2 If flammable gas container exceeds volume limits, remove non-compliant flammable gas container from applicable areas (see BASES)	1 hour
2 Flammable gas location and use requirements not met while waste containers in storage in the WASTE MANAGEMENT FACILITY	1 1 If flammable gas container within five (5) feet of containers, separate flammable gas from waste containers	10 minutes.
	<u>OR</u> 1 2 Remove flammable gas container from waste container storage area.	1 hour
	<u>OR</u> 2 If flammable gas container in prohibited area, remove flammable gas container from prohibited area.	1 hour

AOL 2 EXCEPTIONS

Flammable gas containers may be within five (5) feet of radioactive waste containers if appropriate controls, as specified in the hot work permit, have been implemented (e.g., fire blankets covering waste containers within the five (5) foot distance)

5.3.4 SURVEILLANCE REQUIREMENTS

As specifically stated for each AOL

5. ADMINISTRATIVE CONTROLS

5.4 MAINTENANCE AND SURVEILLANCE OF SC-3 SSCS

5.4.1 Requirements for Maintenance and Surveillance of SC-3 SSCs

A program shall be developed, implemented and maintained to provide the required safety functions of SC-3 SSCs

5.4.2 CREDITED PROGRAMMATIC ELEMENTS

The program shall include the following CREDITED PROGRAMMATIC ELEMENTS

- a Safety functions provided by SC-3 SSCs are maintained as stated in Table 2,
- b The functionality of in-service SC-3 SSCs is periodically inspected and verified,
- c SC-3 SSCs are inspected and/or acceptance tested following repair;
- d Changes made to SC-3 SSCs, and associated engineering documentation and operating instructions, are controlled, and
- e Applicable corrective actions resulting from periodic inspection findings (e.g., Fire Protection) are implemented commensurate with their safety significance

APPLICABILITY This control applies to the SSCs in Table 2 which are the SC-3 SSCs identified in the safety analyses for DEFENSE-IN-DEPTH and worker safety, and the SC-3 SSCs required to support SC-1/2 SSCs.

5.4.3 Specific Controls or Restrictions

The following action statements are implemented when the associated SC-3 SSC safety functions are not provided:

NOTE Surveillance frequency is as specified in Section 1.7 and each surveillance shall be performed within 1.25 of the specified frequency. Use of the 25% grace period does not extend the due date for the next surveillance period.

APPLICABILITY: To WASTE MANAGEMENT FACILITY SC-3 SSCs at all times

5. ADMINISTRATIVE CONTROLS

ACTIONS:

CONDITION	REQUIRED ACTION	COMPLETION TIME
1 Failure of a SC-3 SSC in the WASTE MANAGEMENT FACILITY	1 Perform any compensatory measures defined in Site procedures dealing with the SSC	As specified in Site procedures.
	AND	
	2 1 Restore the failed SC-3 SSC to functional status	45 days
	OR	45 days
	2 2 Submit an action plan and schedule for restoration of the function to the DOE-RFFO	
	OR	
	2 3 Document justification, with appropriate concurrence, for not restoring to functional status	45 days

NOTE The action plan shall (1) characterize the deficiency, (2) state the effect of the deficiency on the AB-required safety function, (3) address the collective significance of the deficiency with other existing facility conditions (e.g., current Justification of Continued Operations (JCOs), discovery issues, other equipment with degraded safety functions), (4) define actions that have been taken to ensure and maintain a safe facility configuration, (5) provide the repair strategy and schedule in sufficient detail to establish critical path milestones (e.g., receipt of replacement parts, vendor availability). Action plans will only be used for routine maintenance. A JCO should be generated for extended outages expected to exceed or exceeding 120 days.

Table 2 Maintenance of SC-3 SSCs Credited in the Authorization Basis Safety Analysis

Safety SSC	Safety Function	Acceptance Criteria
Building 440		
Fire Phones		
Building Heating System		
Fire Breaks around Building		
Building Structure		
Jersey Barriers		
Dock Guardrails		
Berms		
Building 569		

5. ADMINISTRATIVE CONTROLS

Table 2 Maintenance of SC-3 SSCs Credited in the Authorization Basis Safety Analysis

Safety SSC	Safety Function	Acceptance Criteria
Fire Phones	The fire phones provide a DEFENSE-IN-DEPTH safety function in the analysis for postulated accident scenarios (Facility Fires 1-4, Facility Explosions). The safety function of the fire phones is to provide an alarm (fire bells inside the building) to notify personnel inside Building 569 of a fire	Verify fire phones transmit to the Central Alarm Station (CAS) and Fire Dispatch Center (FDC) annually per NFPA 72 Verify fire phones activate inside fire bells annually per NFPA 72
LS/DW System*	The LS/DW system provides a DEFENSE-IN-DEPTH safety function in the analysis for postulated accident scenarios (Facility Fire 3, Spills 1 & 2, Puncture 1, Container Explosion, Facility Explosion). The safety function of the LS/DW system is to provide notification to building occupants in the event of fire, airborne contamination, and Site or building emergency response activities.	Verify audibility of the system in all areas throughout the complex annually. The annual requirement can be implemented by testing one-twelfth of the building monthly
Building Structure Seismic Capacity	The safety function of the building structure is to reduce the impact on radioactive waste containers from structural impacts caused by NPH/EE. These include high winds, tornadoes, wind driven missiles, atmospheric pressure changes, heavy rain, heavy snow, and seismic event less than BDBE	
Building 664 Complex		
Building 666		
750/904 Pads		
Building 906		
Building 991 Complex		
Automatic Sprinkler System	The SC-3 function provides protection of personnel and equipment in new waste storage areas of the building.	Specified in SURVEILLANCE REQUIREMENTS for LCO 3.1
Fire Phones	The fire phones provide a DEFENSE-IN-DEPTH safety function in the analysis for postulated accident scenarios (Facility Fires 1-4, Facility Explosions). The safety function of the fire phones is to provide an alarm (fire bells inside the building) to notify personnel inside Building 991 of a fire.	Verify fire phones transmit to the Central Alarm Station (CAS) and Fire Dispatch Center (FDC) annually per NFPA 72. Verify fire phones activate inside fire bells annually per NFPA 72
Water Gong Alarm	The water gong alarms provide a DEFENSE-IN-DEPTH safety function in the analysis for postulated accident scenarios (Facility Fires 1-3, Spill 2, Facility Explosion). The safety function of the water gong alarms is to provide an alarm indicating activation of the automatic sprinklers and notifying personnel immediately outside of Building 991 of a fire.	Specified in SURVEILLANCE REQUIREMENTS for LCO 3.1
LS/DW System	The LS/DW system provides a DEFENSE-IN-DEPTH safety function in the analysis for postulated accident scenarios (Facility Fire 3, Spills 1 & 2, Puncture 1, Container Explosion, Facility Explosion). The safety function of the LS/DW system is to provide notification to building occupants in the event of fire, airborne contamination, and Site or building emergency response activities.	Verify audibility of the system in all areas throughout the complex annually. The annual requirement can be implemented by testing one-twelfth of the building monthly
Room 166 Window covering and north wall / Building Structure	Covering the window in Room 166 of Building 991 minimizes the possibility that a natural gas leak resulting in an explosion damages the window thereby exposing the room to the possibility of being filled with natural gas, whereby an explosion could occur involving radioactive material. The north wall of Room 166 is also a DEFENSE-IN-DEPTH SSC and is expected to survive an external facility explosion.	The north concrete wall shall be maintained. The window covering and caulking around the window covering shall be maintained.

5. ADMINISTRATIVE CONTROLS

Table 2 Maintenance of SC-3 SSCs Credited in the Authorization Basis Safety Analysis

Safety SSC	Safety Function	Acceptance Criteria
Exterior walls and concrete roofs / Building Structure	The safety function of the exterior walls is to reduce the impact on radioactive waste containers from structural impacts caused by NPH/EE. These include high winds, tornadoes, wind driven missiles, atmospheric pressure changes, heavy rain, heavy snow, aircraft crash, and seismic event less than BDBE.	The 12-inch reinforced concrete walls and 4-inch reinforced concrete roofs shall be maintained. The 35 psf design feature of the concrete roofs shall be maintained.
Hallway floor / Building Structure	The safety function of the hallway floor is to reduce the likelihood that structural failure of the floor could impact radioactive waste containers. The accident type that could result from structural failure of the floor is a radioactive material spill due to container breach.	The analyzed floor loading capacity of the hallway floor shall be maintained.
RCRA Units		

* SURVEILLANCES and REQUIRED ACTIONS for the LS/DW criticality alarm function are covered in LCO 3.2 Criticality Alarm System. Remaining LS/DW functions shall be maintained as SC-3 SSCs covered by this AC.

5. ADMINISTRATIVE CONTROLS

5.5 EMERGENCY RESPONSE

5.5.1 Requirements for Emergency Response

A program shall be established, implemented, and maintained for emergency response

5.5.2 CREDITED PROGRAMMATIC ELEMENT

The program shall include an approved Building Emergency Response Operations procedure

5. ADMINISTRATIVE CONTROLS

5.6 SAFETY MANAGEMENT PROGRAMS

5.6.1 Requirements for Safety Management Programs

The Safety Management Programs (SMPs), as described and graded in Chapter 3, *Safety Management Programs*, of the FSAR shall be maintained to provide worker protection and DEFENSE-IN-DEPTH safety functions. The SMPs include Occurrence Reporting, Configuration Management, Nuclear Safety, Fire Protection, Emergency Response, Quality Assurance, Radiation Protection, Safety and Industrial Hygiene, Work Control, Environmental Protection and Waste Management, Maintenance, Training, Organization and Management, Criticality Safety, Records Management and Document Control, and Transportation.

5. ADMINISTRATIVE CONTROLS

5B.0 GENERAL APPLICATION BASES

ACs 5 0 1 through 5 0 5 establish the rules for AC use and application and are applicable to all ACs at all times, unless otherwise stated. Since ACs are primarily for DEFENSE-IN-DEPTH and worker safety, the requirements are not as rigorous and the safety impact of individual failures is not as severe as for engineered system LCOs and SRs. These AC rules are fully consistent with the Applicability LCOs and general SRs and their BASES, which are provided to control LCOs and SRs for the engineered systems.

AC 5 0 1 establishes the requirement that ACs are to be met at all times. Each AC is divided into two distinct requirement sections. All ACs will have CREDITED PROGRAMMATIC ELEMENTS. Certain ACs will contain specific controls or restrictions consisting of limits and controls that have associated action statements. The manner in which the ACs are met is defined by either specific controls or restrictions with an associated action statement or by adherence to CREDITED PROGRAMMATIC ELEMENTS.

ACs 5 0 2 through 5 0 4 establishes the rules under which failures in AC programs progress from the level of individual failures of CREDITED PROGRAMMATIC ELEMENTS or failure of specific controls or restrictions through to VIOLATION of the AC.

CREDITED PROGRAMMATIC ELEMENTS is a defined term relating to programmatic elements that are credited for controlling the progression of an accident scenario. These elements minimize the potential frequency or consequence of an accident scenario. They are reflected in assumed operational aspects that impact base frequency or available hazardous material assumptions. Controls or restrictions relate to aspects of operation that limit the frequency or consequence of an accident scenario. These latter conform to the limits of the analysis (e.g., total material-at-risk in a facility available for involvement in a seismic event or maximum amounts of material-at-risk allowed in certain containers or locations).

The rules regarding CREDITED PROGRAMMATIC ELEMENTS contain a three tiered control structure consisting of individual failures, programmatic deficiencies, and AC VIOLATION. Adequate implementation of programmatic elements is the responsibility of facility management who must be able to demonstrate that programmatic compliance is achieved at all times. Individual failures are used as a measurement of adequate program implementation and should be tracked at some level by facility management. Upon occurrence of an individual failure, it is the responsibility of facility management to ensure a safe facility configuration. The safety significance of individual failures will be assessed through the site infrastructure program for Occurrence Reporting coupled with the requirements of the Unreviewed Safety Question (USQ) process in assessing Occurrences Reports for DISCOVERY conditions. When individual failures are determined to be systemic in nature, the adequacy of the program implementation comes into question and

5. ADMINISTRATIVE CONTROLS

corrective measures must be taken Failure to take appropriate corrective measures will lead to a programmatic deficiency and continued failure to correct the problem will lead to AC VIOLATION

Failure to meet the action statements for the specific controls or restrictions will lead directly to VIOLATION of the AC

Upon the occurrence of an AC VIOLATION, safe facility configuration must be assured but may not require the suspension of operations As these are programmatic requirements, the severity of response will depend on the individual VIOLATION and its impact on operations This assessment is the responsibility of facility management

AC 505 establishes the compliance requirement for ACs relative to OUT OF COMMISSION equipment or areas

5. ADMINISTRATIVE CONTROLS

5B.1 ORGANIZATION AND MANAGEMENT BASES

5B.1.1 Requirements for Organization and Management BASES

The establishment and maintenance of a minimum staff provides assurance that the facility is capable of operating within the controls defined in the TSRs at all times. Clearly defined lines of authority, responsibility, and communication establish command and control within the facility, accountability for safe operation, and definition of the relationship between support functions important to safety and line management.

5B.1.2 CREDITED PROGRAMMATIC ELEMENTS BASES

- a. Documenting lines of authority, responsibility, and communication within the facility establishes a formal command and control structure necessary for safe operation. Management and operating personnel accountabilities are defined, decision-making authority is established, and support organization roles and reporting relationships to line management are formalized. Multiple forms of documentation may be utilized, including organizational charts, functional descriptions of departmental responsibilities and relationships, or job descriptions of key personnel positions. Documentation is updated whenever organizational changes are of sufficient significance to modify the command and control structure.
- b. The minimum staff defines, by position and number, those management and operating personnel that are necessary for facility safety. Minimum staffing assures that qualified personnel are available to provide the expertise and decision-making capability required to operate the facility within the analyzed safety envelope.

5B.1.3 Specific Controls or Restrictions

5. ADMINISTRATIVE CONTROLS

5B.2 INVENTORY CONTROL AND MATERIAL MANAGEMENT BASES

5B.2.1 Requirement for Inventory Control and Material Management BASES

Inventory Control and Material Management provides control for the location, storage configuration, and handling of NUCLEAR MATERIAL within the building based on the quantity, type, and form. This element protects the initial source term assumptions of the accident analysis that limit the amount of MAR available for potential release in the event of an accident.

5B.2.2 CREDITED PROGRAMMATIC ELEMENTS BASES

Since there is no specific SMP for Inventory and Material Control, these elements comprise an adequate program as derived from the results of the accident analysis.

- a This element protects the initial source term assumptions of the accident analysis that limit the amount of MAR available for potential release in the event of an accident.
- b By adhering to Site accepted container standards for NUCLEAR MATERIAL packaging, the amount of MAR is minimized through the containment provided by the drum or storage container. This element controls the consequences of a fire both to the worker and the non-worker and assures that if a container is dropped, its integrity will be maintained.
- c Damaged or degraded containers may not confine NUCLEAR MATERIAL adequately to minimize the consequences in the event of a drum failure. Therefore, visual inspections of the exterior surfaces of the container (e.g., no noticeable signs of bulging or damage such as indentations, punctures, or leakage) are performed to identify any significant degradation of container integrity that could lead to a release of radiological material. This early detection limits the potential of a catastrophic failure and controls the hazard to which the worker may be exposed. Visual detection may take place upon receipt, prior to movement, or periodically during area tours and surveillances to confirm the integrity of primary confinement and to provide for early detection of confinement degradation.
- d Container venting relieves excess pressure, and limits explosive gas concentrations. This prevents a rupture of the drum lid seal that could potentially lift the drum lid and result in the release of radioactive material. The credited drum venting is performed using the Site-wide drum-venting program. Drum venting limits the concentration of flammable gasses in the drum which limits the frequency of the accidents that credit the drum vent being installed. The 55-gallon drums are verified to have a vent installed upon receipt in the building, which also reduces the frequency of the event.

5. ADMINISTRATIVE CONTROLS

5B.2.3 Specific Controls or Restrictions

EXAMPLE

5. ADMINISTRATIVE CONTROLS

5B.3 CONTROL OF COMBUSTIBLE MATERIALS AND IGNITION SOURCES BASES

5B.3.1 Requirement for Control of Combustible Materials and Ignition Sources BASES

Maintaining control and verification of combustible materials and ignition sources reduces both the potential for fire in the facility and its consequences. Should a fire be initiated, proper management of combustible materials assures that propagation to unanalyzed quantities of MAR will not occur. Additionally, limiting the available amount of fuel controls fire size and eliminates the potential for flashover.

Solid combustible materials that are stored in metal containers and combustible/flammable liquids stored in accordance with Site standards are protected combustibles, and are therefore exempted from this control.

5B.3.2 CREDITED PROGRAMMATIC ELEMENTS BASES

- a Fire propagation is controlled when appropriate spacing is maintained between
 - combustible packages,
 - a combustible package and available MAR,
 - a combustible package and vulnerable fire barriers.
- b Spark, heat, or flame-producing work is the principal initiator of fire within the facility. Controlling hot work assures that combustible materials and MAR are reduced or appropriately protected, and that personnel are adequately trained to safely perform the work (including Fire Watches). Should a fire occur, first responders are available to minimize and control the event. The Site Fire Department is adequately staffed and equipped to respond with credited capability.
- c Fire propagation is controlled and the potential for flashover is eliminated when combustible package sizes are appropriately established and maintained.
- d Requiring corrective action implementation commensurate with safety concern findings ensures that conditions will not go without adequate attention.

5B.3.3 Specific Controls or Restrictions

5. ADMINISTRATIVE CONTROLS

5B.4 MAINTENANCE AND SURVEILLANCE OF SC-3 SSCS BASES

5B.4.1 Requirement for Maintenance and Surveillance of SC-3 SSCs BASES

A program ensures consistent management of the SC-3 safety functions identified in Table 4. Restoration of the identified safety function may be provided by the means deemed appropriate by facility management based on facility and operations status at the time. Descriptions of the SSCs, safety functions, and systems interfaces may be found in Chapter 5, *Safety Structures, Systems, and Components*, of the FSAR.

5B.4.2 CREDITED PROGRAMMATIC ELEMENTS BASES

- a Maintenance of safety functions assures the continued minimization of risk by providing DEFENSE-IN-DEPTH functions for authorized operations
- b Periodic verification assures that the status of SC-3 SSC functions is known and risk can be managed appropriately. Periodicity requirements may be identified in programmatic requirements, defined in System Evaluation Reports (SERs), or contained in other engineering technical justification
- c Post repair inspection and/or acceptance testing following repair assures the availability of the identified safety functions
- d Control of changes made to SC-3 SSCs ensures that the equipment will continue to provide its intended safety function following any modification or ensures the configuration of the facility is known
- e Requiring corrective action implementation commensurate with safety concern findings ensures that conditions will not go without adequate attention

5B.4.3 Specific Controls or Restrictions

5. ADMINISTRATIVE CONTROLS

5B.5 EMERGENCY RESPONSE BASES

5B.5.1 Requirement for Emergency Response BASES

The Building Emergency Response Operations procedure is credited in the accident analysis to mitigate potential consequences from a spill or release of NUCLEAR MATERIAL

5B.5.2 CREDITED PROGRAMMATIC ELEMENTS BASES

The approved Building Emergency Response Operations procedure ensures the facility is capable of responding to a spill or release. The procedure provides for the following

- a Periodic evacuations drills, including identification of egress routes, assembly areas, and personnel accountability,
- b Emergency notification (e g , LS/DW, two-way radios), and
- c Spill response, including the availability and maintenance of emergency equipment and material

Specific Emergency Plans will be modified, as necessary, to reflect new and modified activities ensuring adequate plan coverage

6. DESIGN FEATURES

6. DESIGN FEATURES

The purpose of this section is to list passive DESIGN FEATURES important to safety in Building 569. DESIGN FEATURES are passive features that reduce the frequency and/or mitigate the consequences of uncontrolled releases of radioactive or other hazardous materials from the facility to protect the health and safety of the public, collocated workers, or immediate workers. Passive features credited in the accident analyses are discussed in Table 3. Configuration management and maintenance of DESIGN FEATURES important for safety are addressed in Chapter 3, *Safety Management Programs*, of the BIO.

Table 3 Building 569 Design Features

DESIGN FEATURE	BASIS
Metal Waste Containers/Drums	Metal waste containers and drums used for the storage of TRU, TRM, residue, and residue-mixed wastes are containers and drums are relied on in the safety analysis to (1) not be breached by falls of less than four feet, (2) resist breaching due to material handling equipment impacts, (3) resist breaches from forklift tire impacts, (4) retain container lid due to internal overpressure from exposure to expected fires; and (5) not to propagate fires from container to container when exposed to fires. These containers are also expected to provide resistance to breaching from structural failures of the building during natural phenomena hazards and external events (NPH/EE).
Building Structure Seismic Capacity	The BUILDING 569 structure (exterior walls and roof above stored waste) was credited with reducing the possibility that a NPH/EE (i.e., high winds, tornadoes, heavy rain, heavy snow, or seismic event) could impact NUCLEAR MATERIAL present in the building. The building structure is credited with (1) surviving a design basis earthquake, (2) surviving high winds and tornadoes, (3) surviving wind driven missiles, (4) surviving atmospheric pressure changes, and (5) surviving a roof collapse due to heavy rain or heavy snow.

7. REFERENCES

SAMPLE